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State Programs: Leadership, Partnership, and Evidence-Based Interventions

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The Centers for Disease Control and Prevention (CDC) has developed this book to share its vision of how states and their partners can reduce the prevalence of chronic diseases and their risk factors by instituting comprehensive statewide programs. The recommendations for achieving this vision are based on prevention effectiveness research; program evaluations; and the expert opinions of national, state, and local leaders and public health practitioners, including CDC staff. In addition to describing some of the most promising practices available to state programs, the book provides numerous sources, including Web sites, that describe state and local examples of what can be achieved; state-of-the art strategies, methods, and tools; and training opportunities. We hope that this book will provide a framework that will help state and local health departments build new chronic disease prevention and control programs and enhance existing programs.

This chapter provides a brief general overview of the role of state health departments in establishing comprehensive statewide chronic disease prevention programs. This role includes providing the following components critical to the success of such programs:

- Leadership.
- Epidemiology and surveillance.
- Partnerships.
- State plans.
- Targeted interventions in various settings.
- Evaluation.
- Program management and administration.

The ensuing chapters in this document discuss how to establish or improve state programs that target specific chronic diseases and risk factors. However, the following discussion is relevant for all such programs, including those at the local level.

LEADERSHIP: The state health department must be the unifying voice for the prevention and control of chronic diseases.

The leadership of state health departments is critical to ensuring that funding for comprehensive chronic disease prevention programs is stable, that these programs use funds efficiently, and that program efforts are targeted where they can make the most difference. State health departments must develop the capacity to manage these programs and secure the necessary resources to do so, including the technical expertise needed to plan, implement, and evaluate interventions in a variety of settings.

Because state health departments may not always have or be able to obtain such expertise in-house, their leadership role in obtaining assistance from potential partners is especially important. By bringing together all parties interested in chronic disease prevention and control, state health departments can help them coordinate their efforts, thereby reducing wasteful redundancies, creating cost-saving synergies, and targeting limited resources where they are most needed. State health departments should be a catalyst for change at all levels and in all sectors of the community as they engage multiple parties in a comprehensive, statewide approach to preventing and controlling chronic diseases.

Another important aspect of state health department leadership is communication. State health

departments must be able to articulate the health needs of state residents, convincingly argue how a comprehensive approach to chronic health problems will help meet those needs, and publicize the accomplishments of various program elements to ensure their continued funding and support. In short, state health departments must be both educator and advocate, as well as a leader in promoting cooperative working relationships among all entities interested in addressing chronic disease prevention and control.

EPIDEMIOLOGY AND SURVEILLANCE: State health departments must establish the burden associated with chronic diseases and frame the problem to be addressed.

Epidemiology and surveillance provide the foundation for chronic disease prevention and control services. Epidemiology is the study of the health of human populations; it includes defining health problems, identifying their causes, determining populations at greatest risk, and evaluating effectiveness of health programs and services. Public health surveillance, a core tool of epidemiology, is the ongoing, systematic collection, analysis, and interpretation of health data. Public health surveillance data should be the basis for the development and implementation of any public health program and should be disseminated freely to any group that will use them. An epidemiologic surveillance system is essential for establishing the burden of chronic disease, framing the problem to be addressed, and describing populations in greatest need of interventions.

To garner support for proposed programs, state health departments must describe the burden of chronic disease in terms that speak to a variety of audiences, including community residents, state leaders, and other decision-makers. This description should include the geographic and demographic distribution of diseases and risk factors and the identification of population segments (by age, race, sex, socioeconomic status, location, etc.) that are disproportionately affected. It should also identify disease trends, including trends in rates of disease-attributable deaths and disability, the age of people at disease onset, and the age of affected people at death.

State health departments can use these descriptions of disease burden to raise public awareness of the threat posed by chronic diseases and to mobilize partners to address these diseases in a comprehensive manner. These descriptions should also serve as the basis for developing comprehensive state plans, identifying priority populations and strategies, estimating program costs, and allocating resources.

Findings from chronic disease surveillance systems should be routinely communicated in easily understandable terms. State health departments can use surveillance data in stand-alone reports as well as in periodic updates of state plans. The ultimate goal of chronic disease surveillance efforts is to define the burden of disease and other program-related factors in a manner helpful to those involved in decisions affecting the development and implementation of prevention and control programs. To achieve this goal, however, state health departments must allocate sufficient resources and staff time to surveillance, data management, and reporting.

State health department surveillance systems should incorporate indicators for specific diseases and associated risk factors that were developed through a partnership among the Council for State and Territorial Epidemiologists (CSTE), the Association of State and Territorial Chronic Disease Program Directors (ASTCDPD), and the Centers for Disease Control and Prevention (CDC). (See “Indicators for Chronic Disease Surveillance: Consensus of CSTE, ASTCDPD, and CDC” [1999], www.cste.org.) These indicators provide a common set of measures for chronic disease surveillance and can be useful in establishing priorities and guiding the consistent implementation of chronic disease surveillance activities across the nation.

PARTNERSHIPS: State health departments must establish strong working relationships with other government agencies and with nongovernmental lay and professional groups.

State health departments must form alliances with other organizations willing to work together to achieve common goals. Such partnerships help provide diverse perspectives on specified health problems, give state officials access to key intervention channels within a community, provide at-risk populations an opportunity to participate in program planning, mobilize needed resources and expertise, and help ensure that identified health problems are treated as priorities. Some potential partners are obvious, such as voluntary health organizations that address the major chronic diseases—heart disease, cancer, diabetes, and arthritis. However, health departments must also reach out to the broader community and involve organizations that are not traditional partners in health programs. By forming such broad, multi-disciplinary partnerships, health departments and their various partners can more effectively identify populations most affected by a particular health problem, determine where resources are most needed, address barriers and gaps in service, generate support for reducing the burden of chronic disease, and identify and share "best practices."

State health departments should also work with academic institutions and other partners to ensure that research results are translated into sound public health practice and that program interventions are based on science. Because most activities are conducted at the local level, health departments should be especially diligent in soliciting the participation of local-level partners. This participatation will help to ensure that the plan's design accounts for local contexts, including culture and resources, and that the plan is implemented as intended and supported by local leaders.

Coordination among partner organizations may be one of the most difficult challenges faced by state chronic disease programs. Potential partners can be expected to participate in a comprehensive approach to chronic disease prevention and control only if they are able to focus on their own issues even as they work synergistically with others. State health departments should identify a broad group of partners and strive for maximum buy-in, commitment, and investment from those partners. They should encourage partners to coordinate their activities and thus avoid unproductive duplication of effort. By strengthening existing alliances and building new relationships, state health departments can substantially leverage their own limited resources and gain access to the capacity and skills required to implement an effective comprehensive chronic disease prevention and control program.

STATE PLANS: State health departments must use data and work with partners to develop comprehensive state plans to guide program efforts.

State health departments, in cooperation with local health departments and partners, are responsible for developing state plans that describe what health problems will be addressed, how they will be addressed, and how program activities will be funded and evaluated. A state plan may be a single, comprehensive chronic disease control plan, a series of plans for separate categorical programs, or a combination of both. It should present strategic objectives and specify the roles of various partners in achieving them. To foster the widest possible support for any chronic disease program, officials should involve as many stakeholders as possible in developing, reviewing, and evaluating the program plan. Once developed, this plan should be reviewed and updated as progress is made or circumstances change.

State health departments may wish to use relevant *Healthy People 2010* objectives (www.healthypeople.gov) as a template in devising their chronic disease prevention and control plans. However, state plans should also reflect the unique assets and needs in each state. To accurately identify these needs and assets, state health departments and their partners

may need to conduct a thorough review of state health data, as well as an assessment of available expertise and resources.

Plans for comprehensive state chronic disease programs should identify priority health issues and at-risk populations and specify outcome objectives for each (e.g., decrease the rate of disease in a specified population from a current baseline level to a specified target level within a specified time period). They also should describe how proposed activities will be funded, as well as detail the proposed activities of each participating organization.

Plans for comprehensive state chronic disease programs should address the following issues:

- *Disease burden:* Describe the burden and impact of disease using the best available data. Use state-specific data if possible.
- *Rationale for proposed activities*: Provide evidence to support the strategies outlined in the plan, including a cost-effectiveness analysis of the proposed program (i.e., a comparison of current disease-associated costs to society with an estimate of such costs if the program were implemented).
- *Core capacities and functions*: Describe the basic capacities and functions needed to conduct a comprehensive, statewide chronic disease prevention and control program.
- *Existing capacity:* Describe the current resources within the health department and among partner organizations, as well as the additional resources needed to implement the proposed program.
- *Objectives, activities, and resources:* Describe program goals and measurable objectives and outline activities to achieve the objectives. For each objective and activity, describe the target population, the intervention channel(s) to be used, the evaluation plan, the resources needed, the partners involved, and the staff required.
- *Time line*. Provide a realistic time line for implementing activities, given available resources.

INTERVENTION: State health departments must identify specific targets for change (either population segments, organizations, or environments), choose the best channels through which to effect such changes, and select appropriate strategies for doing so.

The selection of interventions should be guided largely by health promotion theory, research results, evaluation findings, and program experience. (See the *Guide to Clinical Preventive Services* at odphp.osophs.dhhs.gov/pubs/guidecps and *The Guide to Community Preventive Services* at www.thecommunityguide.org.)

Targets for change: All interventions should be part of a comprehensive strategy that includes changing organizational practices and social policies as a means of promoting individual behavior changes. Most chronic disease programs will need to broaden their current behavioral change strategies so as to include these approaches as well as interventions that target individuals.

Individuals: Programs should identify the audience to be targeted (e.g., by age, sex, socioeconomic status, geograhic location, media habits, or a combination of related factors). The target audience will usually be a population group with a relatively high prevalence of disease or secondary risk factors, limited access to information or services, or a higher risk of developing disease.

Organizations (or "Systems"): Organizations in the community can support individual behavior change in a variety of ways, from providing programs and services to creating policies and environments that enable people to make healthy choices. As a rule, programs should target those organizations (or "systems") most capable of affecting the health of the targeted population segment. For example, to change the health-related behavior and/or health status of children, chronic disease control programs might target schools, day-care centers, faith-based groups,

Boy and Girl Scouts, or youth sports groups. Health-promoting changes to a school "system" could include introducing a new curriculum, modifying school menus or food-preparation methods, or introducing new policies that require health training for all teachers. Such "system" changes can have a long-lasting impact on the people associated with these organizations and can often be made at little or no cost.

Environments: Because the environments in which people live, work, and play can substantially affect their health and health-related behavior, comprehensive chronic disease prevention programs should include health-promoting environmental interventions such as advocating for the passage of clean air ordinances or the establishment of safe and inviting venues for physical activity.

Channels: Channels for chronic disease prevention and control are the organizational avenues through which specific interventions reach targeted individuals and populations. In public health practice, there are four broad categories of channels for intervention: health care settings, workplaces, schools, and community organizations.

Health Care Settings: Health care settings are an important channel for public health interventions because up to 70% of the general population visits some type of health care facility each year. Such interventions are most effective if they include long-term counseling of patients, use culturally appropriate materials and methods developed specifically for health care settings, and are integrated with other educational resources in the community. When possible, family members and other caretakers should be recruited to support patients' attempted behavior changes. Health care organizations and health care professionals also can contribute substantially to system-level changes by adopting policies and practices that promote and protect health.

Workplaces: Workplaces are an important channel for chronic disease prevention and control efforts simply because people spend so much of their time there and are thus a potential captive audience for interventions, including health education campaigns, screening programs, and efforts to reduce occupational hazards. Health promotion and disease prevention are also "good business" for employers: effective programs should enhance productivity and decrease absenteeism, turn-over, and training costs.

Because most employees spend at least a third of their waking hours at work, workplaces can be an effective channel for influencing social norms in numerous health-related areas, including the level of acceptance of exposure to secondhand smoke and the extent to which people incorporate regular physical activity into their daily routine. Employers can also offer economic incentives to promote healthy behavior by employees as well as provide structured health education programs, self-help materials, and role modeling.

Work site interventions can also reach beyond employees to address family members and the broader community. Many large employers establish supportive relationships with local schools to promote programs that benefit students, and both large and small businesses can participate in community interventions and support changes in community policy.

Schools: Schools can be an effective channel for implementing chronic disease prevention and control interventions for children and adolescents. They provide a structured opportunity to reach young people with interventions or health policies designed to foster more healthful behavior and to provide both students and faculty members with the knowledge and skills necessary to adopt healthy behaviors. Schools also provide an opportunity to reach adults who may not be reached through other channels and to reinforce parents' messages to their children.

To be successful, comprehensive school health education programs must be supported by students'

families as well as the larger community and thus should be based on community needs, resources, and standards. Such programs can help students understand the biological and social aspects of health and the benefits of healthy behaviors, appreciate their responsibility for their own future health, strengthen their self-esteem and decision-making skills, improve their ability to resist negative peer influences, and even serve as positive role models for their fellow students.

Community Organizations: Community organizations provide an important channel for chronic disease prevention and control because they offer an opportunity to reach individuals who may not be reached through other channels. They can be particularly useful in reaching underserved groups such as undereducated, economically disadvantaged, rural, or minority populations. Community organizations include religious groups, unions, clubs, professional associations, community action groups, sports groups, voluntary health agencies, and social service groups.

By using such community organizations as channels for interventions, programs may garner support from community leaders who are members, as well as gain access to the resources of the organizations, both of which will help ensure the programs' long-term viability. Community organizations are often a "back-door" way to reach business leaders and elected officials.

Community organizations can provide leadership in changing community health conditions and norms, in promoting beneficial health policies, and in creating economic incentives for healthy behavior. Because of their credibility with community members, these local organizations are often able to educate the public about health-related issues, establish these issues as legitimate community concerns, and stimulate productive public discussion about them. Members of these organizations can also influence the attitudes of other community members and leaders by speaking at group meetings, in public forums, or to the media.

Strategies: Intervention strategies should be comprehensive, multifaceted, mutually reinforcing, culturally relevant, and based on the best current scientific evidence.

Skill Building: Although health education programs do not necessarily result in immediate behavior change, they are nonetheless valuable because they give participants the knowledge, skills, and confidence necessary to adopt healthier behaviors. A comprehensive approach to helping people make such changes should address multiple factors, including their knowledge and beliefs about a health issue, their motivation to change their behaviors, the skills they need to do so, the specific actions they need to take, and the reinforcement needed to adopt and maintain a healthier lifestyle. The effectiveness of education programs can also be improved by the use of incentives, self-help tools, and social support mechanisms. Education can be provided directly to target populations through the channels discussed in the previous section. Education also may be delivered to health care providers, school personnel, or others through indirect approaches such as distance learning, peer education, role modeling, and train-the-trainer programs.

Preventive Health Services: Screening and other preventive services are designed to detect and treat risk factors for disease at the earliest possible stage. These services, however, are most effective if offered in conjunction with educational efforts to motivate people to participate. Appropriate provider training and quality assurance monitoring are also critical to the success of such services. Screening programs should have clearly defined follow-up procedures for tracking participants with abnormal findings and strategies to ensure their compliance with treatment recommendations. Health care professionals usually provide preventive health services in clinical settings, but these services can also be provided in a variety of other settings, including work sites, schools, and community organization sites, and with the assistance of volunteers who are not health care professionals.

Media: Media channels include television and radio stations, newspapers, magazines, billboards, newsletters, and local computer networks. The information conveyed through such channels can be categorized as news, features, entertainment, editorials, or advertisements, any one of which may be the most effective media avenue for delivering a particular health message or for addressing a particular population segment. Social networks or influential individuals are sometimes referred to as informal or "small" media channels; word-of-mouth communications through such channels can play an important role in changing social norms affecting public health. All types of media channels, however, share one characteristic: they can cut across organizational lines that limit the previously described channels.

Using media channels to influence the health-related behaviors of individuals can be an expensive intervention. Media campaigns may be more cost-effective if used to complement or promote other interventions rather than as stand-alone interventions. Media also can be used to promote system-level change by framing a health issue as a public policy concern or by encouraging individuals and organizations to participate in creating more healthful public or private policies.

Policy: Changing the health-related policies of private organizations or governmental entities is another strategy for modifying the health behavior of individuals. The advocacy of private, or voluntary, policies can be as important as promoting the passage of public, or mandated, policies. In fact, persuading employers or schools to voluntarily adopt healthful policies (such as restrictions on smoking) can be a good way to lay the groundwork for the broader public adoption of such policies if the private adoption of them is shown to be effective. Although public policy initiatives will usually have a more far-reaching impact, instituting them can be time consuming and difficult, both because of outright opposition to them and because of disagreements among policy proponents about the details of the policy. Thus public health advocates should not become discouraged if it takes several years to formulate, pass, and enforce an effective governmental health policy initiative.

EVALUATION: State health departments must establish systematic approaches for determining whether their comprehensive chronic disease control program is being implemented successfully, whether this program is as efficient as it can be, and whether its objectives are being achieved.

Program officials should periodically review their progress toward accomplishing the goals and objectives in their program's plan and determine whether they need to redirect activities or resources. They should evaluate program components regularly, using both qualitative and quantitative measures.

Using methods that are congruent with the state plan, program officials should conduct process evaluations to objectively describe their progress in implementing various program elements. Process evaluation results should be used to guide adjustments to program plans and implementation strategies. Program officials must also evaluate the extent to which proven interventions are delivered, program workers are adequately trained, and the target audience did what was expected of them (e.g., attending intervention meetings or completing planned activities and assignments). Process evaluation components for a community-based program could include the number and demographic characteristics of people reached through the program and details of the program, including funding sources and program expenses.

Those who have a direct interest in the program's initiatives should have the opportunity to participate in evaluation activities, including devising the evaluation questions and specifying the type of evidence that will be viewed as credible in answering the questions. Such stakeholders may include those who participated in developing the state plan, health care providers, community representatives, and policy makers. In general, stakeholders who

participate in evaluating program initiatives will be more likely to find the evaluation results accurate and relevant and thus more likely to support program changes that may be dictated by those results. Partners not involved in evaluation efforts should be kept abreast of the progress and results of all evaluations and the potential relevance of these results to their activities and concerns. Evaluation results and lessons learned should be disseminated through written reports and presentations at local, state, and national meetings and conferences. Partner organizations can also be called upon to disseminate program evaluation results to their members and constituents.

State and local health department officials should identify the resources they have for conducting evaluations and any specific help they may need in structuring evaluations of chronic disease prevention and control programs. Some health departments have sufficient in-house capacity, while others obtain help from partners or through contracts with local colleges or universities. (For assistance in developing process evaluations, see The Community Toolbox [www.ctb.lsi.ukans.edu] and the CDC Framework for Program Evaluation in Public Health [www.cdc.gov/eval/framework.htm.])

PROGRAM MANAGEMENT AND ADMINISTRATION: State health departments must provide the consistent administrative, financial, and staff support necessary to initiate and maintain successful programs.

Building infrastructure is critical to the success of comprehensive state chronic disease prevention and control programs. Adequate resources, including trained staff, funding, and in-kind support from partners, are necessary to sustain program efforts and support the implementation of planned activities, as is the support of state health department leaders. Because program planning, development, implementation, and evaluation require the time and attention of a dedicated staff, such a staff should be in place before states attempt to institute a comprehensive chronic disease prevention program.

Such programs also must have a strong management structure and effective, efficient administrative systems that are both agile and auditable. Program components should be coordinated, and the program management structure should provide adequate fiscal and program oversight and facilitate effective communication among program participants and partners. Other keys to effective program operation include appropriate resource allocation, accountability for program results, clearly defined lines of authority, and an organizational structure that allows related program units to interface and interact easily.

Finally, because so much chronic disease funding is categorical (i.e., for programs targeting relatively narrow "categories" of diseases, risk factors, or people), managers of comprehensive chronic disease programs must focus on integrating categorical programs and thus reducing wasteful redundancies among them. Although CDC is one of the largest sources of funding for comprehensive state chronic disease prevention and control programs, these programs also receive support from other federal agencies, their own state government, and various private organizations. Program managers must coordinate all funding streams in a way that avoids duplication of efforts and ensures consistency in their comprehensive approach to improving the health of their constituents.

We anticipate regularly updating this publication to keep pace with the rapidly changing state of the art in applied science and practice in the field. However, we are confident that broader adoption of the promising practices presented throughout this book will result in stronger, more effective state chronic disease programs characterized by the following:

- Integration of categorical state programs to achieve better coordinated, more cost-effective, and comprehensive chronic disease prevention and control.

- Public health programs actively engaged with managed care and other health care providers to improve the quality of care and the quality of life for people living with chronic diseases.
- Improved access to care for uninsured and underinsured people, especially those who have or are at risk of developing chronic diseases.
- The incorporation of new discoveries of the genomics revolution into chronic disease prevention and control programs.
- Stronger and more diverse partnerships, including nontraditional partners such as transportation, media, and urban planning organizations.
- Improved use of media, including mass media, to transform how the public thinks about health and healthy lifestyles.
- Improved state and local policies and systems that support healthy living, including changes in school, workplace, community, and health care settings.
- Progress toward eliminating disparities in health and access to health care services.
- A solid infrastructure for chronic disease prevention and control at the state and local levels, with adequate and appropriately trained staff.
- Broad acceptance that funding for public health chronic disease programs is an essential expenditure that improves and safeguards the health and quality of life of state residents and yields a positive return on investment.

Resources

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